

# The Pilot Brain

How Personality Affects  
Decision Making

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**wats2024**  
O R L A N D O

# Benchmarking “Safety”

Nurture vs Nature – are great pilots born or made?

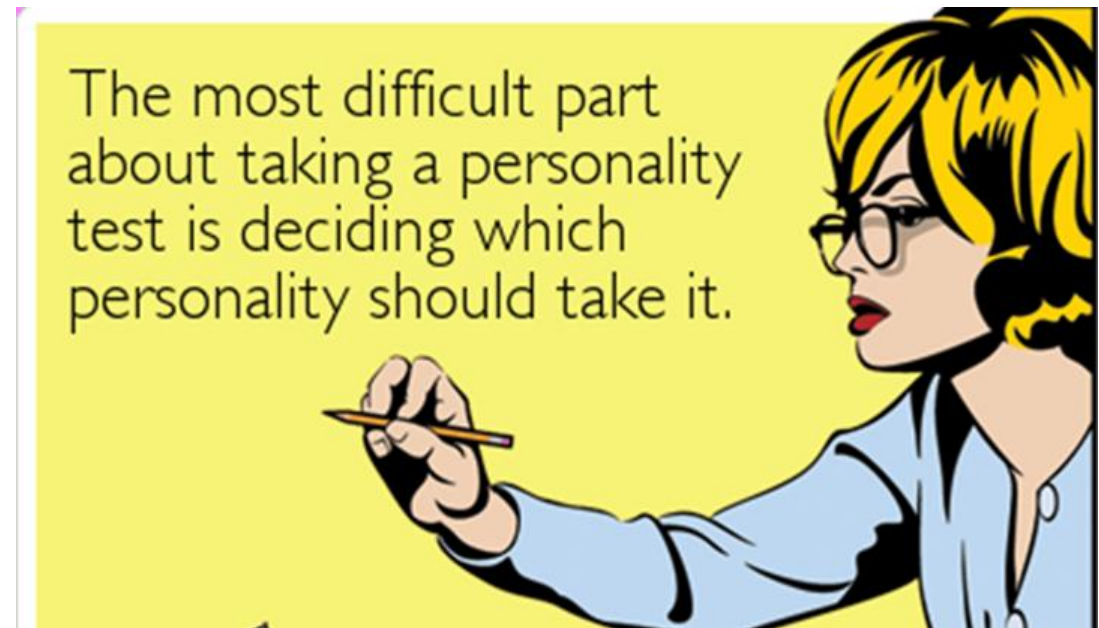
1. Safety Culture Part 91 vs 135 vs 121
2. More Rules  $\neq$  Safe
3. The Part 135 company I flew for had two fatal accidents



# Personality Test for Employment?!

- **Aptitude** = Skills. Can you do the job
- **Personality** = Observable behaviors

What will a pilot do to pass a personality test...? Ironically, cheat.





# Free Trait Theory / Behavior: Home vs Work Persona

Free Trait Behavior = Innate personality traits

Many of us CAN and DO act out of character to serve a goal or culture

- We're all on a sliding scale
- You're not just an introvert vs extrovert – you're some **percentage** of these

## This Free Personality Test

Reveals Your Most Annoying  
Personality Trait

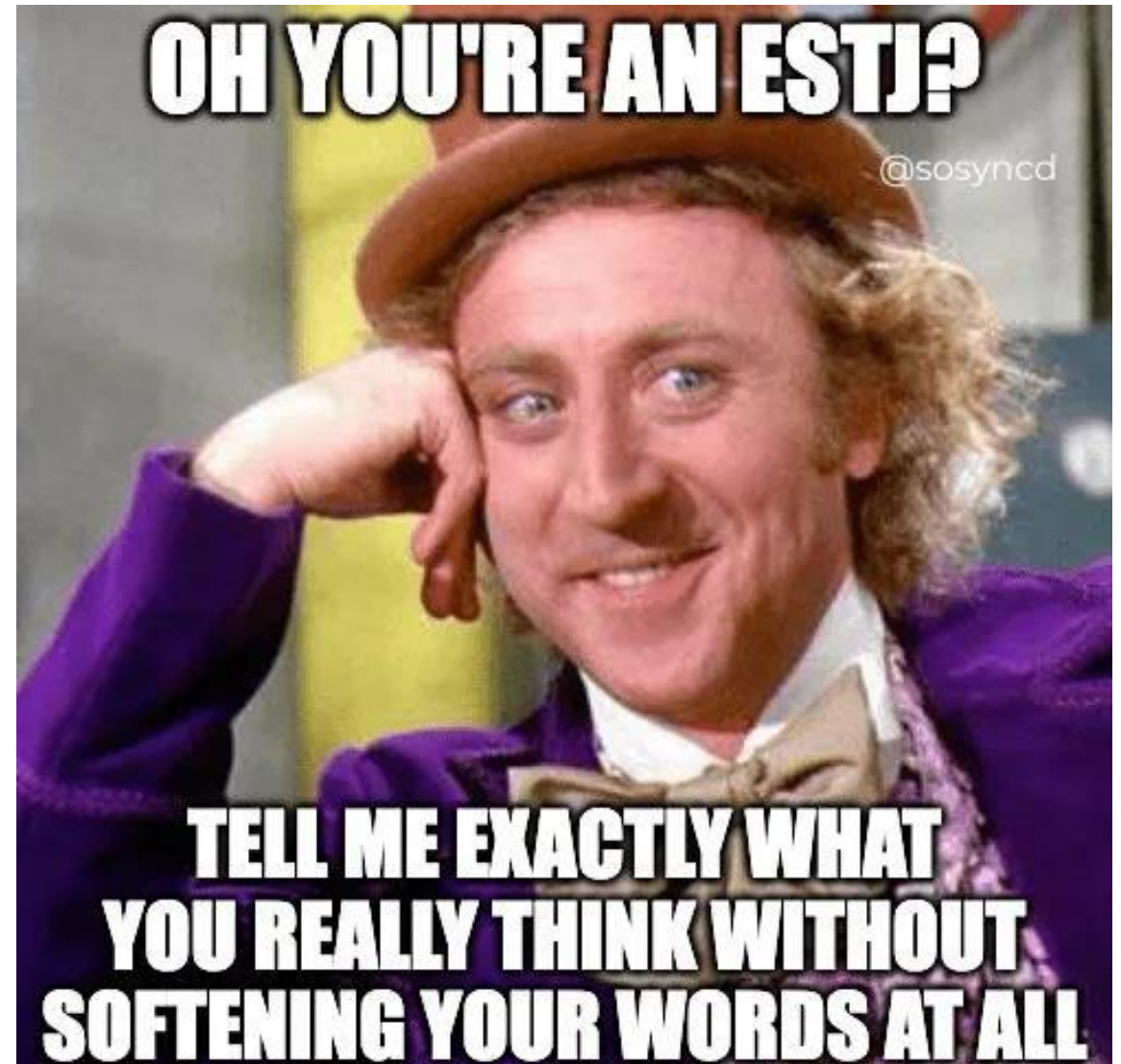


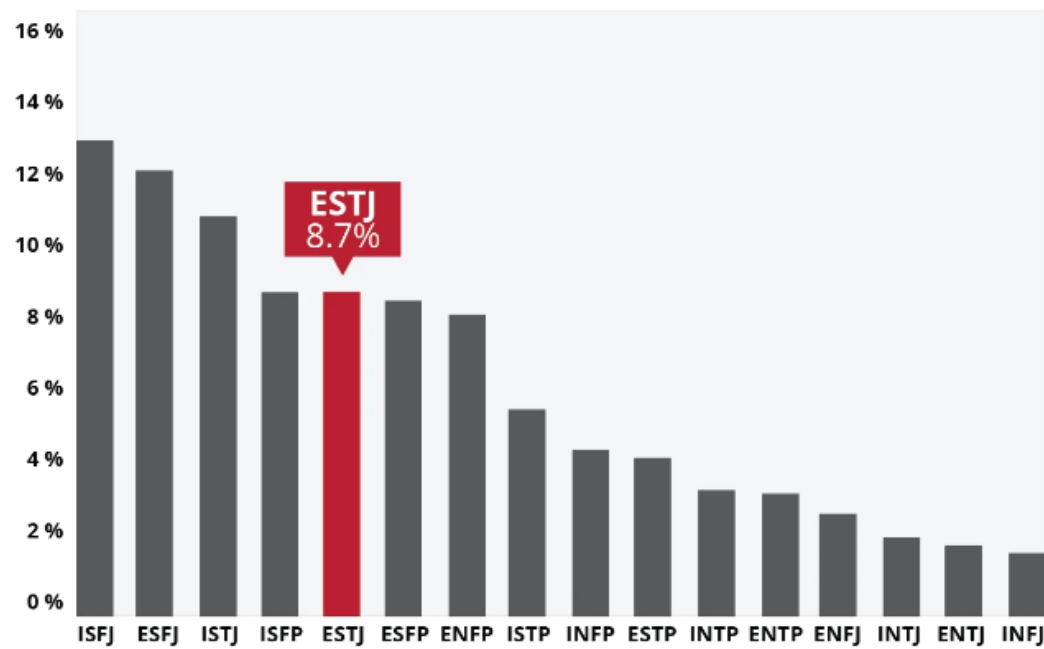
# Meyers | Briggs = ESTJ

## *OBSERVABLE BEHAVIOR*

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- **E**xtraverted: Pilots are mostly INTROVERTS who *exhibit* extroverted behavior
- **S**ensing: Focus on the here and now, rely on senses when processing data, don't want your opinion
- **T**hinking: Facts, logic, independent thinkers
- **J**udging: Prefer structure, order, hate change, absolute in decision making, like checklists, flows, CRM





**37%**  
**Female**

**63%**  
**Male**

## Characteristics of ESTJs

- Energizing
- Communicative
- Open
- Practical
- Action-Oriented
- Objective
- Rational
- Logical
- Decisive
- Sticks to Plans
- Rigid

THEY MOST VALUE

**Organization**

THEY APPEAR TO OTHERS AS

**Methodical, Focused, Planned**

*Ball State University*

*Aptitude + Personality =*

Observable Skills

Common Thread



**Spatial Orientation:** 3D thinking. Superpower but during an emergency, tunnel vision. Pilot's Kryptonite. Startle Effect

**Low Neuroticism:** Low reaction. Ability to think calmly during stress or at least can mimic it. *Detached Compartmentalization. Divorce*

**Unique Extraversion:** Pilots tend to be introverts who display extroverted behavior. *Aggressive opinions, no problem pointing out a mistake or someone's weakness. Don't ask does this make me look fat?*

**Self Confidence | Ego:** It's a good thing. You need every pilot to believe they can get through any emergency. Conflict and power struggles with flight attendants, crew scheduling, copilot vs captain - CRM

**Multi-Dimensional Thinking:** Pull in multiple sources of information and act on it. Not multi-tasking but multi-inputting. Instrument Approach. Plan Continuation Bias. Runway Excursions



# Our personality affects our primitive startle response!

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- Mountain bikers startle me every time
- Which one are you?
- How YOU get out of your startle ?
- *Daniel LaBelle will show you some...*





# The Screamer

## The Boxer

## The Self-Entitled



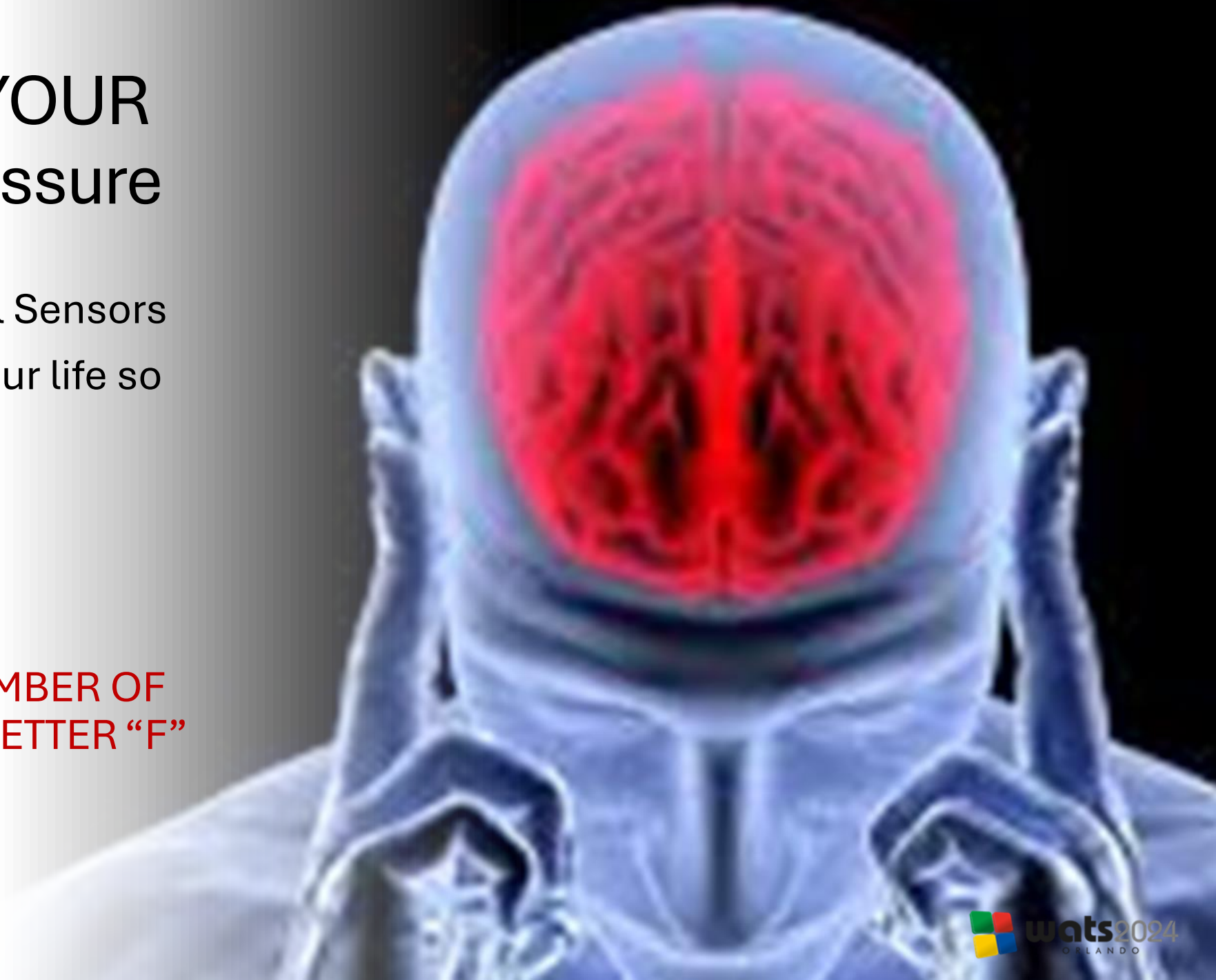


# Let's Simulate YOUR Brain Under Pressure

Failure of Human External Sensors

You've been reading all your life so this should be simple

1. 10 seconds
2. Read one sentence
3. I'll countdown
4. **JUST COUNT THE NUMBER OF TIMES YOU SEE THE LETTER "F"**
5. Ready? Set.
6. Go!





FINISHED PILOT FINDINGS  
ARE THE RESULT OF YEARS OF  
SCIENTIFIC STUDY  
COMBINED WITH  
THE YEARS OF EXPERIENCE





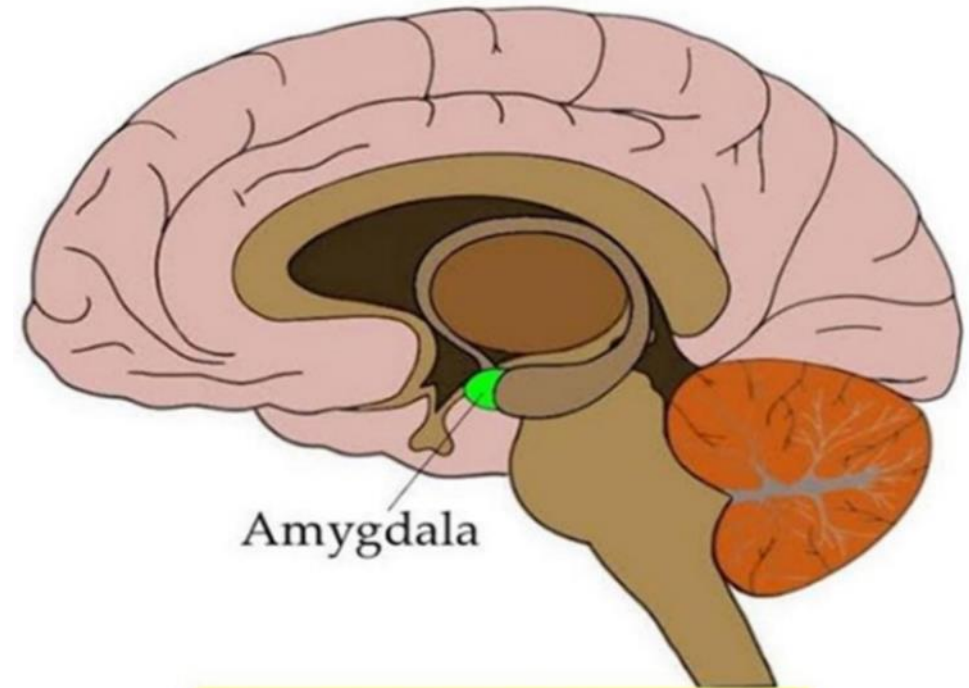


How'd you do?

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# Why Can't You See the “F”s?

1. Brain skips what it thinks is not important
2. During emergency, the little things are very important
3. Tunnel Vision – know your breakout!



## DID YOU KNOW

**'Amygdala' is the part of the human brain that controls fear. If you remove it, you would lose any sense of fear.**



# Takeaway Tools

X-Ray Vision can melt Kryptonite = see the weakness, self awareness.

What is YOUR method for instantly getting out of a startle? Humor? Deep Breath? Tap?

- Real Startle Effect = Take Away the Checklist in the Sim. Recurrent only. Fail Safe.
- Continuation Bias = Brief a Go-Around
- Train Beyond the Mistake
- Pilot Monitoring has enormous power – train them on observing Startle Effect



# No End, Just New Beginnings

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